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ABSTRACT

This booklet presents facts about education in the Soviet Union and traces developments in the field of education. The number of pupils and students enrolled in schools and other educational institutions of the Soviet Union was 109.7 million in the academic year 1987-88. Under consideration in this publication is the structure of public education, how such a large educational organization is administered, which new ideas are developed within such a system, and how such ideas are put into practice. The first part of the booklet offers facts and figures on the structure of public education and educational management. In the second part, general education and vocational school reform are discussed as well as developments in the general education school curriculum. The final part is devoted to the topic of teachers and teacher education in the Soviet Union. (JD)

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SOVIET EDUCATION - FACTS, DEVELOPMENTS
TEACHER EDUCATION

A.J. TREFFERS

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1. Introduction

If you have been in Moscow, you must have seen Moscow State University. Even if you never have had a chance to visit the capital of the USSR, you probably have seen pictures of the so-called Lomonosov University, built after the war, upon the top of the Lenin hills; an impressive skyscraper, 240 meters high.

Even more impressive than this building, however, is the number of pupils and students enrolled in schools and other educational institutions of the USSR. To the exclusion of the children in preschool institutions, this number was 109.7 millions in the academic year 1987/88. Because of this number the following questions are evident: What is the structure of public education in the USSR? How is such a large educational organization administered? Which new ideas are developed within such a system, and how are such ideas put into practice? Where and how does the education of teachers take place?

These questions are discussed in this book, which was meant originally as an introduction to Soviet Education for ICET members, who planned to visit educational institutions in the USSR after the 1987 general assembly in the Netherlands.

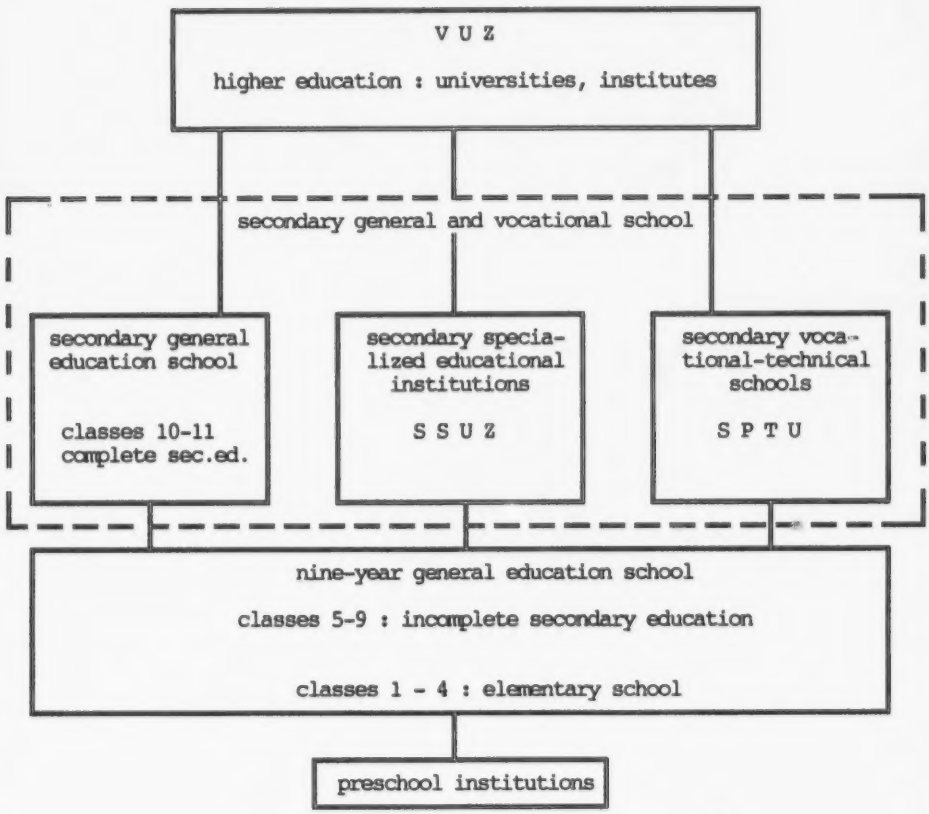
V U Z
higher education : universities, institutes
secondary general and vocational school
secondary general education school
classes 10-11 complete sec.ed.
secondary specialized educational institutions
S S U Z
secondary vocational-technical schools
S P T U
nine-year general education school
classes 5-9 : incomplete secondary education
classes 1 - 4 : elementary school
preschool institutions

Fig. 1 - The structure of public education in the USSR

PART I - FACTS AND FIGURES

2. The structure of public education in the USSR

2.1 Educational institutions

The various types of educational institutions in the USSR are brought together in a survey (Fig. 1). The structure as a whole is fairly simple, and consists of the following components:

- preschool upbringing
- general secondary education
- vocational-technical education
- secondary specialized education
- higher education
- extramural education

Preschool institutions (nurseries and kindergartens) exist for children younger than six years. They are not compulsory, but in many cases children are already sent to a nursery when they are six months old.

When children are six years old they are admitted to the **nine-year general education school**. Traditionally Russian children used to go to school by the age of seven, but as a result of the 1984 school reform this has been changed. The nine-year school consists of four years of elementary school and five years of incomplete secondary education. The nine-year school is compulsory; no alternatives exist except the schools for artistically very talented children, and the schools for physically or mentally handicapped children.

The children who have finished the nine-year school must continue their education in order to complete secondary education. If they do not combine their schooling with a profession by following evening courses, they have three alternatives for further education:

- the secondary general education school (classes ten and eleven)
- secondary vocational-technical schools (SPTU)
- secondary specialized educational institutions (SSUZ).

The three types of complete secondary education are different in various ways: the **Secondary general education school**, very often located in the same building as the nine-year school, is considered to be the best route to higher education. **Secondary vocational-technical schools** gradually developed from vocational-technical schools without complete secondary education. These schools were founded by Stalin, and were meant to train people to replace people sent into military service. After the war the vocational-technical schools developed rapidly. They now offer vocational-technical training, although at a lower level than the secondary specialized educational institutions, as well as general secondary education. **Secondary specialized educational institutions** (technicums, music schools, pedagogic schools for the training of elementary teachers, and many others) offer both specialized vocational-technical training on a fairly high level, and general secondary education. This combination enables the students to look for a job, or to follow higher education after graduation from a secondary specialized school.

The 1984 educational reform reduces the differences between the three types of complete secondary education by putting more emphasis on vocational-technical training in the secondary general education school, although less than Khrushchev did in 1958, and by paying more attention to the general education aspects of the secondary vocational-technical school curriculum.
By the time the 1984 educational reform will be completed, the three types of secondary education will be united into one school, the **secondary general and vocational school**, mentioned by Lenin in the early years of the revolution (Lenin, 1920). By that time complete secondary education will be compulsory for the young, a very important but ambitious requirement.

Higher education is provided at **higher educational institutions** (VUZ): universities and institutes. It can be done as a day time study, in the evening, or by correspondence. Higher education usually takes five years, and is completed with a graduation thesis. The certificates of universities and institutes are equal. The universities as well as some institutes (for

instance the medical institutes, and the pedagogic institutes) run post graduate courses.
Students who have studied successfully are admitted to the aspirantura, the post graduate study. In 1934 two scientific degrees were established: Candidate (Master) of Science, and Doctor of Science. In order to become Doctor of Science one has to complete both the candidate and the doctoral thesis.

The final component of the educational system consists of extramural establishments. Education outside the school is organized by the communist party (the Oktobrists, the Pioneers and the Komsomol); it is given in palaces or stations for young technicians or young naturalists, and in hobby clubs (kruzhki) run by trade unions, libraries, schools, factories, farms and many other organizations. The children summer camps, organized by the pioneer organization, form a considerable part of the extramural establishments. The palaces and stations where this type of education is given, are well equipped, and led by specialized personnel. Extramural establishments are financed by the state.

2.2 Figures about education

The figures about Soviet education given in this section are mainly derived from "SSSR v tsifrakh v 1987 gody" [The USSR in figures for 1987]. Studying the data put together into various tables, we come to the conclusion that the construction of the educational system in the USSR since 1914 has been a tremendous effort. The population of the Soviet Union has grown from 159.2 millions in 1914 to 286.7 millions in 1989 (Pravda, April 23, 1989). The average growth of the population in the seventies and eighties is 0.9 percent, but in this period the population in Soviet Asian republics has grown more rapidly than in most other republics of the union (Pravda, April 29, 1989). However, during the same period the total number of pupils and students, including students following refresher courses, has grown from 10.6 millions in the 1914/15 academic year to 109.7 in the 1987/88 academic year (Table 1).

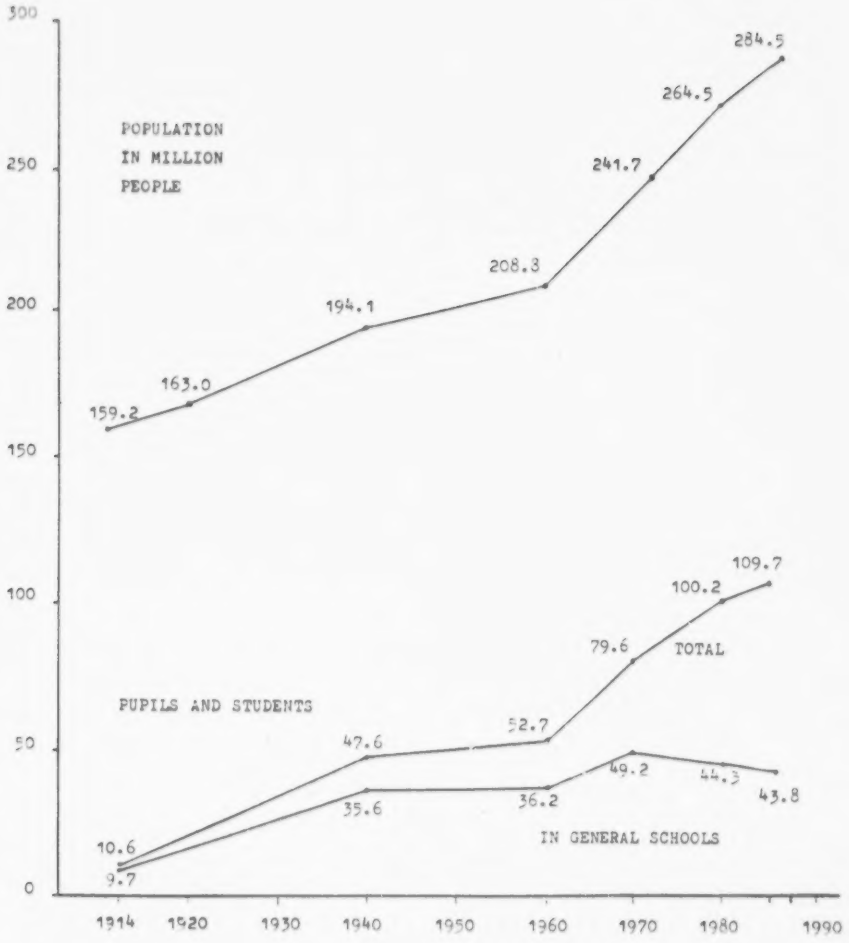

Table 1 - The population of the USSR compared with the number of students enrolled in public education

How the various types of education mentioned in the previous chapter have developed since the revolution, is shown in a special table (Table 2). One may come to the conclusion that during the Khrushchev administration (1953-1964) a further development took place as to secondary specialized education, vocational-technical education, and higher education. This trend continued in the Brezhnev period, but during this period the general education schools were also growing, and a strong emphasis was put on in-service training and retraining of personnel throughout the country. The influence of the Gorbachev administration on education and educational management in the Soviet Union will be mentioned in Part II, " Developments" (Section 4.5).

More data about general schools can be found in a separate table (Table 3). If we compare the number of general schools in the Soviet Union with the total number of schools, one can easily come to the conclusion that a concentration of children in relative large schools takes place. The average number of pupils in general education schools is still low (319 in 1986), but the number has grown considerably (161 in 1960).

The table on preschool education shows that the number of children sent to nurseries and kindergartens grows relatively faster than the number of preschool institutions (Table 4). This means that the concentration of children in relative large schools also holds for preschool education. Besides, one might conclude that the shortage of nurseries and kindergartens, often mentioned in publications about the Soviet Union, still exists (Treffers, 1975).

Statistics about extramural establishments show the number of children enrolled in the various institutions (Table 5). One can see that children libraries and pioneer camps for youngsters form a substantial part of the activities organized in this area of upbringing. Sport clubs and pioneer palaces come next, followed by schools concentrating on art.

	1914/15	1940/41	1960/61	1970/71	1980/81	1987/88
Total number	10.6	47.6	52.7	79.6	100.2	109.7
-in general education schools; classes 1-11	9.7	35.6	36.2	49.2	44.3	43.8
-in specialized educational institutions	0.05	1.0	2.1	4.4	4.6	4.4
-in vocational-technical schools	0.11	0.7	1.1	2.6	4.0	4.2
-in higher education	0.13	0.8	2.4	4.6	5.2	5.0
-in-service and retraining	0.6	9.5	10.9	18.8	42.1	52.3

Table 2 - The number of pupils and students by types of education (x 1,000,000)

	1914/15	1940/41	1960/61	1970/71	1980/81	1987/88
Total number of general schools (x 1000)	124	199	224	190	145	135
Total number of children in general schools; classes 1-11 (x 1,000,000)	9.7	35.6	36.2	49.2	44.3	43.8
Total number of teachers (x 1,000,000)		1.2	2.0	2.6	2.6	3.2

Table 3 - General education; total numbers of schools, pupils and teachers

	1940/41	1960/61	1970/71	1980/81	1987/88
Total number of institutions for preschool education (x 1000)	46.0	70.6	102.7	127.7	145.0
Total number of children in preschool education (x 1,000,000)	1.953	4.428	9.281	14.337	16.5

Table 4 - Preschool education; total numbers of institutions and children

	1970/71	1980/81	1985/86
Total number of children in extramural establishments	27.4	41.9	50.0
The number of children in various extramural establishments			
pioneer palaces	1.6	3.1	4.8
stations for young technicians	.2	.6	.9
stations for young naturalists	.1	.3	.5
stations for young tourists	1.1	.7	.7
children·s parks	.4	.3	.6
children·s railway clubs	.3	.4	.4
pioneer camps	8.8	12.1	14.5
art schools	.8	1.4	1.5
children·s libraries	12.8	20.0	21.6
sports clubs	1.3	2.5	4.3
other organizations	.6	1.0	1.1

Table 5 - Extramural establishments in the USSR (x 1,000,000)

3. Educational management in the Soviet Union

3.1 Levels of educational administration

Within the system of Soviet educational management five administrative levels can be distinguished (Fig. 2):

-Union
-Republic
-Province (oblast)
-District (rayon): a city or a city district
-Local level: a village, a collective farm, an industrial plant

On each level two administrative bodies can be found: the Communist Party and the Soviet Government. The two leading bodies of Soviet education are strongly interrelated by the system of nomenclatura, which, however, is under discussion at present. Nomenclatura means that the same person is appointed in both the communist party and somewhere else in the hierarchy of the Soviet Government. On each level the decisions about education are taken by both types of administrative bodies, but within a republic the decisions taken on that level have to be in conformity with the decisions taken at a higher level.

3.2 The all-union level of educational administration

On the all-union level the highest administrative bodies of the CPSU and the Government are found. As far as the CPSU is concerned, the administrative organizations are: the All-Union Party Congress, the Central Committee, the Politburo, and the Secretariat. As to the Government, we find on this level the Congress, the Supreme Soviet of the USSR, the Presidium of the Supreme Soviet, The Council of Ministers, the All-Union Ministries, and the State Committees. Until 1988, two ministries and one state committee were dealing with education on the all-union level:

-the USSR Ministry of Education;
-the USSR Ministry of Higher and Secondary Specialized Education;
-the USSR State Committee for Vocational-technical Education of the Council of Ministries.

The All-Union Ministry of Education, established in 1966, controlled preschool, primary and secondary education. According to Zajda (1980) the main tasks of the All-Union Ministry of Education were:

1. Ensuring communist education of children and youth, and providing for their spiritual, physical, and aesthetic development (socio-political);
2. Management of preschool education, primary and secondary general education, and adult education;
3. Promotion and co-ordination of educational research in the country;
4. Elaboration and carrying out of measures on the further development and improvement of the system of people·s education and presenting the corresponding proposals for the consideration of the Government;
5. Specification of targets for the current and long-term education plans in collaboration with the Council of Ministers of the republics;
6. Determination of the content of general secondary polytechnic education and labour training of the pupils;

7. Improvement of the educational curricula for secondary schools of general education;
8. Preparation and publishing of school textbooks;
9. Rendering assistance to the republics of the Union in improving the management of schools and preschool and adult educational establishments;
10. Fostering improvement in the professional skills of teachers and other workers in education;
11. Development of foreign relations in the field of education.

(Zajda, 1980, p. 52)

In connection with the decree to bring down the level of bureaucracy in educational management, and to foster democracy and self-government in education, the three all-union administrative bodies were replaced by the USSR State Committee on Public Education. Ministries of Education are now only found on the level of the republic.

In the report to the 1988 All-Union Congress of Public Education Workers the chairman of the USSR State Committee, Gennadi Yagodin, describes the present structure of public education management (Yagodin, 1989). In his own words:

> In these new conditions, the congress becomes the supreme public body of the administration of public education. During the intervals between congresses, a major role is to be played by a Council on Public Education, which the congress will elect. The Council (...) will discuss important questions concerning the development of public education, drafts of major documents, and reports from the State Committee of the USSR on Public Education. The Council will be empowered to initiate legislation and to hear reports from any units and councils within the system of public education. (...) Of course, democratizing the management of public education does not simply imply the institution of congresses, councils and other public organizations. It also calls for a radical redistribution of the functions and powers of the central, regional and local bodies of administration. The applicable principle in this area is very

> simple: an educational establishment should decide all questions it can decide unaided. Decision-making on issues requiring coordination with other state organizations should be delegated to the upper echelons of administration. (Yagodin, 1989, pp.27 -28)

A special place in the hierarchy of educational management is taken by the **All-Union Academy of Pedagogical Sciences** (APN), one of the five academies in the Soviet Union. Founded originally as the Academy of Pedagogical Sciences of the Russian Federation, the APN became an all-union academy in 1973. The APN consists of four units:

-scientific institutes
-experimental schools
-pedagogic library
-publishing department

The reconstruction of the Academy of Pedagogical Sciences is lead by Davydov, one of the leading educational psychologists in the Soviet Union. Davydov is the coordinator of various educational experiments, and author of "Problems of developmental teaching" (Davydov, 1986).

Decisions as to the 1958, 1968, 1984 school reforms, and the 1973 and 1985 Acts on Public Education in the USSR are the result of cooperation between the various committees of the CPSU, the Government, and the Academy of Pedagogical Sciences. The role of the CPSU in both policy-making and executive committees is very strong. The influence of the CPSU can be found in various aspects of education, for instance the formulation of the basic principles of education, the implementation in general education schools of the principle of polytechnical education throughout the past sixty years, the compulsory study of marxism and leninism in higher education, the content of the new general education school curricula, etcetera. The basic principles of education, embodied in the 1985 Act on Public Education, are cited here as an example of the influence of the communist party on education.

The basic principles of the education in the USSR are:

1. The equality of all citizens of the USSR in regard to obtaining an education regardless of origin, social or property status, racial or national affiliation, sex, language, attitude toward religion, type and character of employment, place of residence, or other circumstances;
2. Universal secondary education of young people;
3. Vocational education of young people;
4. The state-run and social character of all educational institutions;
5. The provision of all types of education free of charge, the maintenance of some preschool children and school students on full state support, the provision of scholarships and benefits to schoolchildren and college students, the issuance of school textbooks free of charge, and the provision of various types of material aid;
6. The free choice of the language of instruction; instruction in one's native language or the language of another people of the USSR;
7. Uniformity of the system of public education and continuity of education in all types of educational institutions, making it possible to go from lower levels of instruction to higher ones;
8. Uniformity of instruction and communist upbringing; collaboration of institutions of education and upbringing, the family, social organizations, and labor collectives in the upbringing of children and young people;
9. Linkage connecting the instruction and upbringing of the rising generation with life, with the practical building of communism, with socially useful, productive labor; polytechnical labor training and instruction;
10. The scientific character of education, its constant perfection on the basis of the latest achievements of science, technology, and culture;
11. The humane, highly moral character of education and upbringing;

12.The secular nature of education, which excludes the influence of religion;

13.Coeducation.

(The 1985 Act on Public Education, Article 4; Soviet Education, 1989, Vol.XXXI, no.2, pp. 11-12)

3.3 The administration of the Soviet school

When we come to the lowest level of administration, the school, the question might be asked, "How is a Soviet school administered?" The director of the school and his -more often than not her- deputy are in charge of the quality of education and the general administration of the schools. Zajda (1980) has listed their particular duties:

1. Supervision of the ideological and political aspects of education and upbringing of the pupils.
2. The implementation of the official curricula and the quality of instruction.
3. Guiding and assisting their staff.
4. Assisting the youth organizations at school (the Pioneers and the Komsomol).
5. Directing the work of the parents· committee.
6. Submitting reports on the work of the school to higher educational authorities.

(Zajda, 1980, p. 66)

The director can be supported by three committees (Treffers, 1984):

-The **Pedagogic Advisory Board**, consisting of representatives of the teaching staff. The Advisory Board deals with the curriculum of the school, the teaching methods, and the personal growth and development of the children.

-The **School Bureau of the Communist Party**, formed by five persons, selected from the members of the Communist party present in the school This bureau is responsible for the moral and political education offered by the

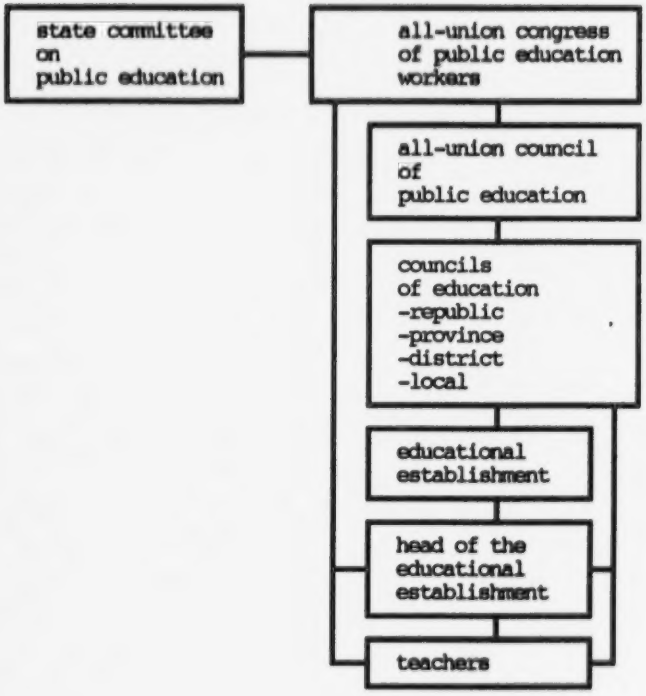
state committee on public education
all-union congress of public education workers
all-union council of public education
councils of education -republic -province -district -local
educational establishment
head of the educational establishment
teachers

Fig. 2 - Educational management in the USSR

school and the activities of the Oktobrists, the Pioneers and the Komsomol.

-The Parents' Committee, led by the director of the school. The tasks of the Parents' Committee are to bridge the gap between the school and the parents, to organize vocational guidance, and to handle problems concerning individual children.

Within the new system of public education administration the head of an educational establishment is personal responsible for the results (Yagodin, 1989, p. 30). A veto power is suggested for impracticable or unreasonable

decisions made by the local educational council. This means that the very much centralized, top down organized system of public education management gradually turns into a more democratic system of self-government.

Within the system of public education administration an important role is played by the bottom up stream of information through the channels of the **Trade Union of Teachers** and the system of **Institutes for the In-service Training of Teachers**. This information stream connects the various levels of educational administration.

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Орган Центрального Комитета КПСС

№ 4 (23893) ● Среда, 4 января 1984 года ● Цена 4 коп.

Проект ЦК КПСС

ОСНОВНЫЕ НАПРАВЛЕНИЯ РЕФОРМЫ ОБЩЕОБРАЗОВАТЕЛЬНОЙ И ПРОФЕССИОНАЛЬНОЙ ШКОЛЫ

"The fundamental directions of the general education and vocational school reform"; the project of the Central Committee of the Communist Party, published in the Pravda, January 4, 1984.

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PART II - DEVELOPMENTS

4. General education and vocational school reform

4.1 The 1983 Plenum of the Central Committee

At the 1983 Plenum of the Central Committee the general secretary of the CPSU, Andropov, announced the steps taken by the party and the government concerning a union-wide school reform. The decree of the Plenum stated:

> Raise the level of social education, or upbringing (vospitanie), work in schools and vocational-technical training schools. Consistently implement the Leninist principles of a unified labor polytechnical school; instill school pupils with the habit of and love for socially useful labor; broaden their intellectual horizons; develop in each of them the high qualities of a citizen of socialist society and an active builder of communism. Utilize the school's potential for aesthetic and physical education more fully. Raise the teacher's prestige and authority, and show more concern for his qualifications, working conditions, and living conditions. (Prokof'ev, 1983, p.55)

Prokof'ev, by that time all-union minister of education, suggested that the decree should result in a number of practical measures, with respect to various fields of education and educational management, such as:

- -the civic, moral and political development of the youth,
- -the atheistic education of children and adolescents,
- -the revision of the curricula and the textbooks of general schools,
- -the interrelation of the ten-year general education school with the education system of vocational-technical education,
- -the improvement of the teacher training curriculum.

Although the issues mentioned by Prokof'ev are not new, his article contains several progressive statements: learning by heart is condemned; the future teacher must be taught how to inspire pupils to strive for a

conscious perception of facts and phenomena; the initiative of the children is not always supported; teaching is called an art because it does not tolerate stereotypes; a course of hygiene and sex education will be introduced in all Soviet schools.

4.2 The 1984 school reform

The text of the 1984 school reform drafted by a commission of the Politburo originally has been published in the Pravda and most other leading Soviet newspapers.

Under the title **The fundamental directions of general education and vocational school reform** [Osnovnye napravleniya reformy obshcheobrazovatel'noj i professional·noj shkoly] the proposal was endorsed by the CPSU Central Committee Plenum on 10 April, and by the USSR Supreme Soviet on 12 April 1984.
The integral text of the school reform proposal, the speech given by Chernenko to the 10 April Plenum, the Resolution of the CPSU Central Committee on the reform proposal, the speech of Aliev, made in the Supreme Soviet Plenum, the Resolution of the Supreme Soviet, and a series of the reform related documents are published in a booklet entitled: **About the general education and vocational school reform - documents and materials** [O reforme obshcheobrazovatel·noj i professional·noj shkoly - sbornik dokumentov i materialov], (Moscow, 1984).
The major part of the documents mentioned above has been translated into English and published in a double issue of the journal "Soviet Education", entitled **The adoption of new Soviet school reforms II** (Soviet Education, 1985, Vol. XXVII, no. 6-7).

4.3 The fundamental directions of general education and vocational school reform

The document of the 1984 Soviet school reform, endorsed by the CPSU Central Committee Plenum on 10 April and by the USSR Supreme Soviet on 12 April consists of eight paragraphs:

1. **The school under the conditions generated by the optimalization of developed socialism.**

Three issues are introduced. First the historical roots of the socialist system of public education. The tasks of the CPSU and the Soviet Government to fulfill Lenin·s concept of a unified, labor based, polytechnical school, embodied in his "On polytechnical education - Notes on Theses by Nadezhda Konstantinovna" (Lenin, 1920).

Secondly, the role of education in the present socialist society, in which "labor upbringing should be regarded as a crucial agent of personality formation and as a means of satisfying the national economy·s manpower requirements".

Thirdly, the basic challenges the reform aims to meet:

-to enhance the quality of education;
-to improve the organization of labor upbringing and occupational guidance in the general education school;
-to increase pupils· responsibility for the quality of their schoolwork;
-to heighten the prestige of the teacher and the production training master, and to raise their salaries;
-to reinforce the material base of education;
-to optimize the structure and the administration of public education.

2. **The structure of general secondary and vocational education.**

Here the major elements of general education schools, vocational-technical schools and secondary specialized educational institutions are described; some of them are already given in this paper (Section 2.1):

-eleven-year general education for everybody;
-formal instruction starts from the age of six;
-elementary education is extended by a year;
-secondary general education includes grades ten and eleven of the secondary general education school, the secondary vocational-technical schools and the secondary specialized educational institutions.
-in-depth studies in mathematics, the natural sciences, and the social sciences will be given to pupils in grades eight and nine;
-labor instruction is given in grades ten and eleven. It is coupled with the occupations for which society has a need.

Furthermore this section deals with the ratios among the three streams of complete secondary education. They will meet the needs of the national economy. This means that a strong emphasis will be put on the vocational education stream in the near future.

3. **Enhancing the quality of the teaching and upbringing process.**
   In this section the draft of the reforms in general and vocational education indicates the need of quality in the teaching process:
   -the scientific content of education;
   -the general educational preparation in secondary vocational-technical schools;
   -the instructional forms, methods and means; including issues such as the decrease of maximum class sizes;
   -the interpretation of phenomena, studied in the natural and social sciences, in accordance with the principles of a materialistic world view.
   The remaining points of the section deal with the quality of communistic upbringing in general education and vocational-technical schools.

4. **Labor upbringing, training and occupational guidance.**
   Labor training has to be an important aspect of the secondary general education school curriculum. In grades ten and eleven the instruction will be given directly at the work site. This instruction will culminate in the mastery of a particular occupation. Although the name of Khrushchev, who started labor training in the upper grades of the secondary school in 1958, has not been mentioned, one can see that the draft is based upon experiences obtained in the early sixties. As far as labor training is concerned, the proposal has to be worked out by administrative bodies on both the all-union level (the Ministry of education and the State-Committee in charge of vocational training and labor) and the various lower levels.

5. **The social and family upbringing of children and adolescents.**
   This section pays attention to preschool education, extramural

establishments, and to the family in matters of upbringing. A new curriculum for preschool education, based on developmental psychology and national cultures and traditions, will be drawn up. Extended-day groups also will be restructured. The reform proposal broadens the objectives of extended-day groups from teaching assistance with home work to interest-based activities and the creation of "a caring atmosphere that closely approximates the child·s domestic situation".

6. **The teacher in Soviet society.**

In this part of the reform proposal the difficult, important and complex task of a teacher is mentioned. "The many millions who make up the Soviet teaching body are our country·s pride and the Party·s trusty mainstay in the upbringing of our young people". Presumably more important for the status of the teaching profession and the motivation to go into teaching will be the statement that the salaries of personnel in public education are to be raised.

Much attention in this section is paid to teacher training. Curricula and syllabuses are to be reworked. Courses of study on fundamentals of contemporary production are to be made. The training in psychology and pedagogy has to be expanded. A transition has to be made in pedagogic institutions from four-year to five-year courses. "The quality of teacher training in universities must be upgraded, and universities must do more to help pedagogical higher educational institutions in the development of scientific research and in raising the qualification of research and teaching cadres".

Compared with other school reforms, the proposal is realistic with respect to the preparation of elementary teachers: no comments are made as to the existence of the pedagogic schools, training a considerable part of the (rural) elementary teachers, but often condemned in previous reforms.

7. **Strengthening the material base of education.**

Only a small section of the reform document is dedicated to the material base to meet the needs of the school reform. In the coming two five-year plans such questions have to be solved as the creation of a necessary

base for labor training, extended-day school, and extramural establishments.

8. Optimizing the administration of public education.
   Proposals are made with regard to the various levels of educational management described earlier in this paper:
   -Interdepartmental commissions have to be created on various levels of educational management in order to solve problems ranging from the coordination of administrative organs and the enrolment policy to the creation of the conditions suitable for labor education.
   -The district level is to be strengthened because of its important role in the formation of teaching cadres, in-service training, the cooperation of the general education schools and the institutions providing labor teaching and vocational guidance.
   -The working conditions of the principals of general education schools have to be improved, and valid criteria have to be drawn up in order to evaluate the work of the teacher and the school as a whole.
   -The rural school is very much supported by the reform proposal because of its important influence upon the cultural development of the rural area. The efforts of the Communist Party, the Soviet, the Trade Union and the Komsomol have to be combined in order to complete this objective.
   -Finally "improvements should be made in the supervision of primary Party organizations in educational institutions".

Summarizing, the 1984 school reform deals with both a number of qualitative aspects of education and a series of school administrative aspects.
As to the school administration one might say that a trend exists toward decentralization in educational management, notwithstanding the fact that Party School supervision exists on all levels of school management.
As far as the qualitative aspects of education are concerned, we can see that, although the ideological concepts of upbringing are very much emphasized in the proposal, the reform deals with a number of practical issues, which are very often concerned with the learner and the teacher.

On the other hand, however, more attention is paid to the role of education in a socialistic society, to the process of teaching and upbringing, and to the conditions for (labor) teaching, than to the individual learner and the individual teacher - to learning and teaching styles; to the personal needs and objectives.

4.4 The 1985 Act on Public Education

The "Fundamentals of Legislation of the USSR and the Union Republics Concerning Public Education" [Osnovy zakonodatel'stva Soiuza SSR i soiuzhnykh respublik o narodnom obrazovanii], the 1985 Act on Public Education, set down the most important proposals of the 1984 school reform. This means that as to education the Gorbachev administration has taken over the developments already started in the previous period. The 1985 Act on Public Education has been published in "Uchitel'skaia gazeta" (December 5, 1985, pp. 2-3). An English translation of the act has been published by "Soviet Education" (1989, Vol. XXXI no.2). The "Basic Principles of Public Education", given in section 3.2 form an important article of the 1985 Act on Public Education. From the English version we quote parts of articles which deal with preschool education, secondary education and vocational-technical education:

Article 16

Children's preschool institutions collaborate closely with the family in order to provide for children's comprehensive, harmonious development and upbringing; they maintain and strengthen children's health, provide for physical and aesthetic upbringing, develop cognitive interests and abilities, instill in children a love of nature, their home district, and their Motherland, a respectful attitude toward their elders, goodness, comradeship and collectivism, and other high moral qualities; they teach children standards of behavior, love of labor, independence, and rudimentary practical skills; they teach the children good organization and discipline and readiness for instruction in school.

Article 18

Universal secondary education is provided in the secondary general education schools, secondary vocational-technical schools, and secondary specialized educational institutions which provide, throughout the whole territory of the USSR, strict continuity of instruction and upbringing, fundamentally uniform content, and uniform level of general secondary education. (...) It is the duty and obligation of every young citizen of the USSR to obtain a secondary education.

Article 19

In order to convert systematically to universal vocational education of young people, vocational education is being developed and perfected in secondary vocational-technical schools as well as in secondary specialized and higher educational institutions; in the secondary general education schools, work training is carried out on polytechnical foundation in conjunction with the acquisition of a particular profession.

Article 31

The secondary vocational-technical schools ensure uniform principles of organizing the teaching-upbringing process, fundamentally uniform content and a uniform level of general secondary education, and uniform requirements for the training of qualified worker cadres over the entire territory of the USSR.

4.5 The 1988 Plenum of the Central Committee

Strongly connected with the content of the speeches of Ligachev and Gorbachev (Uchitel'skaia gazeta, Februari 18 and 19, 1988), made at the 1988 Plenum of the CPSU, the Plenum of the Central Committee of the CPSU approved a number of important proposals concerning the reconstruction of public education. This decree is published in Uchitel'skaia gazeta under the title **Decree of the CPSU Central Committe Plenum of Februari 18, 1988, On the Course of Restructuring of Secondary and Higher Education and the Party's Task in Carrying It Out** (Postanovlenie plenuma Tsentral'nogo komiteta KPSU ot 18 fevralia 1988 goda, O khode perestroiki srednei i vysshei

shkoly i zadachakh partii po ee osushchestvleniiu], (Uchitel'skaia gazeta, February 23, 1988,pp 1-2). The proposals are divided into four groups:
The first group deals with the depth and the speed of the transitions, with respect to methods of teaching, level of technical equipment, and teacher education. They are considered as not meeting society's needs.
The second group concentrates on changes in the aims of the 1984 school reform, the development of individual aptitudes by means of differentiated instruction, the objectives of vocational training, and the implementation of measures, taken by the CPSU.
The third group of proposals focuses on self-education of the students, and on democratization (self-government) of the public education administration.
The fourth set of proposals concentrates on a number of traditional issues, such as communistic upbringing, patriotism, atheistic education, etcetera, but they are formulated in a new way, and brought in relation to the other proposals. Other topics are added, for instance the increasing democracy in education, and the function of teacher education in the reconstruction of education in the USSR.

From the third group of proposals that part of the first section, which deals with the changes in the aims of education reform, is cited here. The changes, mentioned by the CPSU Central Committee Plenum are in short:

- Shaping and implementing the concept of universal secondary education;
- Large scale technical retooling of general, vocational, and higher education;
- Elimination of departmental barriers and implementation of a truly state policy in the field of public education;
- Comprehensive democratization of public education;
- Transformation of the system of training and retraining teaching cadres.

(Soviet Education, 1989, Vol XXXI, no.4, p.72).

A general education school in the surroundings of Leningrad

5. The general education school curriculum

5.1 The traditional curriculum

With respect to both the subjects taught in the general education school and the hours spent on the various subjects, the general education school curriculum did not undergo basic changes until 1987 (Table 6). Even important changes in the structure of education, for instance the transition from a three-year elementary education period into a four-year program, or the re-introduction of work training in the upper grades of the secondary school, did not change the essence of the curriculum as a whole. This also can be said with respect to the proposals for changes in the mathematics and natural science curricula, published in 1986 (Section 5.2). The majority of the changes deals more with the updating of the curriculum content and the teaching methodology, than with the number of subjects, the balance

between the various subjects, or the total workload of the children. Proposals for fundamental curriculum changes with respect to these issues have been published in 1987 (Section 5.3).

Until 1988 curriculum changes were prepared by the Chief Directorate of Schools of the USSR Ministry of Education, the Scientific Research Institute of Curriculum and Teaching Methods of the USSR Academy of Pedagogical Sciences (APN), and the leading Pedagogic Institutes in Moscow and Leningrad. New curricula are tried out in the APN experimental schools, and introduced through the nation-wide network of the institutes for the

Subject	Hours per week in classes										
	1	2	3	4	5	6	7	8	9	10	total
1. Russian language	12	11	10	6	6	4	3	2	-	-	54
2. Russian literature	-	-	-	2	2	2	2	3	4	3	58
3. Mathematics	6	6	6	6	6	6	6	6	5	4	57
4. History	-	-	-	2	2	2	2	3	4	3	18
5. Social studies	-	-	-	-	-	-	-	-	-	2	2
6. Nature study	-	1	2	1	-	-	-	-	-	-	4
7. Geography	-	-	-	-	2	3	2	2	2	-	11
8. Biology	-	-	-	-	2	2	2	2	1	2	11
9. Physics	-	-	-	-	-	2	2	3	4	5	16
10. Astronomy	-	-	-	-	-	-	-	-	-	1	1
11. Technical drawing		-	-	-	-	-	1	1	-	-	2
12. Foreign language	-	-	-	4	3	2	3	2	1	1	16
13. Chemistry	-	-	-	-	-	-	2	2	3	3	10
14. Foundations of Soviet State and law	-	-	-	-	-	-	-	1	-	-	1
15. Art	1	1	1	1	1	1	-	-	-	-	6
16. Music	1	1	1	1	1	1	1	-	-	-	7
17. Physical education	2	2	2	2	2	2	2	2	2	2	20
18. Work training	2	2	2	2	2	2	2	2	4	4	24
19. Military training	-	-	-	-	-	-	-	-	2	2	4
20. Elective courses	-	-	-	-	-	-	1	2	4	4	11
Total	24	24	24	27	29	29	31	33	36	36	293
Practical work (days)	-	-	-	5	5	5	-	2	2	-	

Table 6 - The curriculum for elementary and secondary schools (Denisova, 1983)

	6	7	8	9	10	11	total
Biology	68	68	68	68	34	51	357
Physics	-	68	68	102	118	136	402
Chemistry	-	-	102	85	68	68	323
Mathematics	204	204	204	204	153	136	1105

Table 7 - Numbers of hours spent in grades 6-11 on mathematics and the natural sciences (per annum); 34 hours per annum are equivalent to one hour per week

Grade	Biology	Physics	Chemistry
11	genetics development reproduction cytology man and biosphere	quantum physics electromagnetic waves, oscillations, and induction	organic chemistry
10	ecology evolution descent of man	electrodynamics molecular physics	organic chemistry
9	human health man	oscillations waves conservation dynamics mechanics	metals carbon nitrogen chemical reactions oxygen dissociation
8	natural communities evolution of animals vertebrates invertebrates	luminous phenomena electromagnetic and electrical phenomena thermal phenomena	halogens chemical bond atomic structure periodic system inorganic compounds water solutions bases hydrogen acids salts oxygen combustion
7	invertebrates lichens fungi bacteria plants	work power pressure interaction of bodies substance structure	-
6	plants	-	-

Table 8 - The 1986/87 general education school biology, physics and chemistry curriculum

in-service training of teachers, the general educational journals, and the professional teaching methods journals, published by the Ministry of Education, such as "Biologiya v shkole" [(Biology in the school], "Khimiya v shkole" [Chemistry in the school], "Prepodavanie istorii v shkole" [The teaching of history in the school], and "Literatura v shkole" [Literature in the school]. The developments in the mathematics, natural sciences, history and literature curricula are discussed below. We just mention a proposal for a new curriculum for the elementary school, "Hello, Children!", written by Amonashvili (Amonashvili, 1983).

5.2 The 1986/87 natural sciences curricula

With the help of the new curricula for mathematics and the natural sciences, recently published in "Soviet Education" (Soviet Education 1987, Vol.XXIX, No. 3, 5-6), one can easily find the major changes made in the past five years as to the four subjects mentioned (Tables 6 and 7).
As they did in the past, mathematics and the natural sciences require a considerable part of the time available. The mathematics, biology, and physics curricula remained almost the same as far as the number of hours per week is concerned. The chemistry curriculum, however, has been changed as to the times allotted to inorganic chemistry (grades 7-9) and organic chemistry (grades 10-11).

When we compare the 1986/87 curricula for biology, physics and chemistry, listed in a separate survey (Table 8), with the data collected by Treffers (1974) about the natural sciences in the general education school curriculum, one may conclude that the main curriculum units are almost the same. The order of the curriculum units, however, is adapted to the transition from a ten-year school with three year elementary education to a eleven-year school with four year elementary school, starting one year earlier.
In-depth study of the curriculum content and the explanatory notes leads to the conclusion that the new science curricula differ from the previous curricula on several points:

-The content is less academic; abstract knowledge is abandoned or studied only in grades ten and eleven;
-The curricula are built up around leading concepts; for instance, leading ideas in the biology curriculum are: evolution of the organic world, multilevel organization of animate nature, interconnection of structure and function, self-regulation, etcetera;
-Goals, and instructional tasks and formats are given; experiments, field trips, practical projects, and applications for computers are described in details, more than it has been done before;
-Safety techniques form a part of the curriculum;
-Interdisciplinary links are indicated for the various sections within a subject and for the sciences as a whole; for instance in the new curriculum topics as molecular biology and the chemical organization of the cell can be studied in close connection with organic chemistry;
-Basic requirements are given as to knowledge and skills, to be learned separately; "The learning activity of pupils is examined at various levels: the understanding and reproduction of knowledge; the ability to apply knowledge to a typical learning situation; and the ability to apply knowledge under altered, more difficult conditions" (Krasnovskii, 1985, p.76-77);
-Guidelines are given for the objective evaluation and grading of the child's knowledge and skills.

Summarizing: The 1986/87 Natural Science curricula differ in various important aspects from the previous curricula. Although put in a rigid academic framework, the content of the curricula, as to the educational objectives, leading concepts, interdisciplinary links, teaching methods and levels of evaluation, is based on present pedagogical theory. The new curricula serve two integrally connected functions: "to reflect the content of education and to control the learning process" (Krasnovskii, 1985, p.73).

5.3 The 1986/87 history and literature curricula

The new **history curriculum**, published in the history teaching methods journal, has been introduced by the president of the USSR Academy of Pedagogi-

cal Sciences, M.I. Kondakov. Kondakov cites the formulation of the Communist Party, that " the school today is expected to nurture the child not only as a vehicle of knowledge but first and foremost as a citizen, a conscientious, active, ideologically committed worker" (Kondakov 1986, p.8). This demand is taken by Kondakov as the foundation of the humanities (history, geography, social studies, languages) taught in the school.
An important improvement of the history curriculum consists of the strengthening of the ties between world history and the history of the USSR. Also the interconnections between the four sections of world history (Ancient History, Medieval History, Early Modern History, and Modern History) are stronger in the new history curriculum.
The history curriculum, published in English in " Soviet Education", gives the details of the various history programs of grades 5-11 (Soviet Education 1987, Vol. XXIX , No. 11-12). In the "Explanatory Note" an overview has been given of the sections which constitute of the domestic history and world history courses (Table 9).
A brief study of the content of the curriculum for the eleventh grade makes clear that the program is still very conservative and hardly influenced by the recent socio-political developments in the Soviet Union. Because of this the curriculum has been very much criticized. As a result of the critical comments the 1986/87 curriculum has been changed again. This change resulted into a new history text book, and into changes with respect to the grade in which the various sections of the curriculum are taught.

The content of the contemporary history curriculum for the tenth grade of the secondary school can be derived from the new history textbook, "Istoriya SSSR" (Esakov, 1988). If we only pay attention to the section in this book which deals with World War II and the post-war period, we see important changes with respect to Stalin's role in Soviet history. Even in the textbook about modern history for the secondary school, "Noveishaya Istoriya" (Puraeva, 1987), Stalin is mentioned only as a participant of the Theheran, Yalta and Potsdam conferences. The 1988 history text, however, has a special section about socio-political developments in the USSR during the fifties. In this section Stalin's death is mentioned, and comments are

given with respect to the personality cult, the speech given by Khrushchev at the 1956 Plenum of the CPSU, the rehabilitation of Soviet citizens killed during the Stalin period, etcetera. This textbook even contains a fifty page section dedicated to contemporary developments in the Soviet Union, the perestroika:

Perestroika - revolutionary continuation of the October actions
- Revolutionary changes of society; the 27th Congress of the CPSU.
- Intensification of the economy and the growth of production.
- The complex program of the development of agriculture.
- Science and the acceleration of socio-economical development and scientific-technological progress.
- Social policy of Party and State.
- The improvement of the political system of Soviet society.
- Spiritual life in the Soviet Union.
- The fundamental directions of the USSR foreign policy.

With respect to the teaching of literature and the literature curriculum research has been done by Peters. She came to the conclusion "that the teaching of literature in secondary general education schools in the USSR forms a rigid system, that puts an emphasis on the political and moral development of the pupils; the according to Soviet standards correct understanding of literature and literary works is considered very important" (Peters, 1986, p. 119). According to Peters the idea of "correct understanding" is in conflict with the effort to develop problem oriented education in the classroom. The emphasis on the ideological and moral functions of literature leads to the neglect of the aesthetic aspects. In "Russkaya Literatura" (Kachurin, 1988), the textbook for the ninth grade, nothing has been changed as to the points mentioned by Peters. Although the Ministry of Education, the Research Institute of the Academy of Pedagogical Sciences, and the Herzen Pedagogical Institute in 1984 already worked out a renovation of the literature curriculum (Peters, 1986, p.19), up to now the changes have not been introduced into the secondary general education school.

Grade	Section	Hours per annum
11	World history IV - modern history from 1939 to the present day History of the USSR from the end of the 1930s to the present day	102
10	World history IV - modern history from 1917 to the end of World War II History of the USSR from the early twentieth century to the triumphs of communism in the USSR World history II - early modern history from the Paris Commune to the triumph of the Great October Socialist Revolution and the end of World War I	136
9	History of the USSR from early to late nineteenth century World history III - early modern history from the seventeenth century English bourgeois revolution to the Paris Commune	102
8	History of the USSR from ancient times to the late eighteenth century	68
7	World history II - medieval history	68
6	World history I - the history of the ancient world	68
5	History of the USSR - episodic narratives	68

Table 9 - The 1986/87 general education school history curriculum

5.4 Experimental curricula

In 1987 the USSR Ministry of Education took the initiative to present four drafts of experimental curricula for the classes I - XI of the general education school (USSR Ministry of Education, 1987). The plans are considered as reviving the progressive ideas of the People's Commissariat of Education, published in 1920. The experimental curricula are meant for debate and experimental testing (Table 10). They will be introduced during the 13th Five-year Plan. This means that they will not reach the schools

Experimental syllabus of the secondary general education school (Version 1)

School subjects	*Number of hours per week by grades*											*Total*
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*	*IX*	*X*	*XI*	
1. Native language and literature	7	9	10	10	9	9	6	3	3	4	4	78
2. Mathematics	4	4	5	5	6	5	5	5	4	4	4/5	51.5
3. Principles of information science and computer technology	—	—	—	—	—	2	2	—	—	—	—	4
4. History	—	—	—	2	2	2	2	3	3	3	—	17
5. Social science	1	1	1	—	—	—	—	—	—	—	3	6
6. Natural science	—	—	1	2	2	2	3	—	—	—	—	10
7. Geography	—	—	—	—	—	—	3	2	2	2	—	9
8. Biology	—	—	—	—	—	—	—	2	2	2	3/1	8.5
9. Physics and astronomy	—	—	—	—	—	—	—	2	3	4	4	13
10. Chemistry	—	—	—	—	—	—	—	2	2	2	3	9
11. Foreign language	2	2	2	2	3	3	2	2	2	—*	—*	20
12. Esthetics and ethics	2	2	2	2	2	2	2	1	1	1	1	18
13. Physical culture	2	2	2	2	2	2	2	2	2	2	2	22
14. Introductory military training	—	—	—	—	—	—	—	—	—	2	2	4
15. Labor training** and productive labor	2	2	2	2	2	2	3	4	5	4	4	32
Total:	20	22	25	27	28	29	30	30	31	30	30	302
Elective*** studies	—	—	—	—	—	—	2	3	3	4	4	16
Labor practice (days)	—	—	—	—	10	10	10	16	16	20	—	82

*The study of a foreign language in grades ten and eleven is provided as an elective study by decision of the school's pedagogical council.
**In grades seven and eight, drafting is studied for one hour per week in the labor training course.
***Ethics and psychology of family life is studied as an elective.

Table 10 - One of the four experimental curricula published in Uchitel'skaya gazeta (Soviet Education, 1989, Vol. XXXI, no 3, pp. 69)

before the year 2000. The experimental curricula have to accomplish five fundamental objectives. In short:

- To introduce differentiated instruction; 25 percent of the class time will be devoted to optional and elective disciplines;
- To strengthen the humanities to 49.3 percent of all class time;
- To reduce the total number of subjects studied in each grade;
- To reduce the workload of schoolchildren by two to four hours per week;
- The organization of children's activities during the second half of the day; study groups for optionals and electives; Pioneer and Komsomol activities; self-government with respect to the organization of student's labor.

(Soviet Education, 1989, Vol XXXI, no. 3, pp. 62-72)

PART III - TEACHER EDUCATION

6. Teachers and teacher education in the USSR

6.1 Types of teacher education institutions

The preparation of teachers for the eleven-year general education schools takes place in Pedagogic Schools, Pedagogic Institutes, and at the University (Fig. 3).

Pedagogic Schools prepare teachers for preschool education and for elementary education, the grades 1-4 of the general education school. Although they are also found in the city, Pedagogic Schools play an important role in rural areas of the Soviet Union.

Pedagogic Institutes prepare teachers for both elementary and secondary education - the grades 1-11 of the general education school. Courses for future elementary teachers usually last four years. Courses for prospective secondary teachers, who most of the time study two subjects concurrently, last five years. As an example, the curriculum of the initial teacher education course for prospective teachers in two foreign languages is given in a survey (Table 11).

Pedagogic Institutes also organize refresher courses for teachers. The leading Pedagogic Institutes in the USSR, such as the Lenin Pedagogic Institute in Moscow and the Herzen Pedagogic Institute in Leningrad, organize refresher courses for the staff of remote pedagogical institutes as well. Also research is done in a number of pedagogic institutes by the staff and post-graduate students. Scientific articles, published in "Sovietskaya Pedagogika" are frequently written by members of staff of pedagogic institutes. Many of them are also involved in curriculum development and the preparation of textbooks for secondary schools.

Universities train a considerable part of the teachers in the Soviet Union. University courses last five years, and students study one subject only. Compared with the Pedagogic Institutes, the subject matter load of the university curriculum is heavier, the pedagogic content and the skill training program of the university curriculum are weaker.

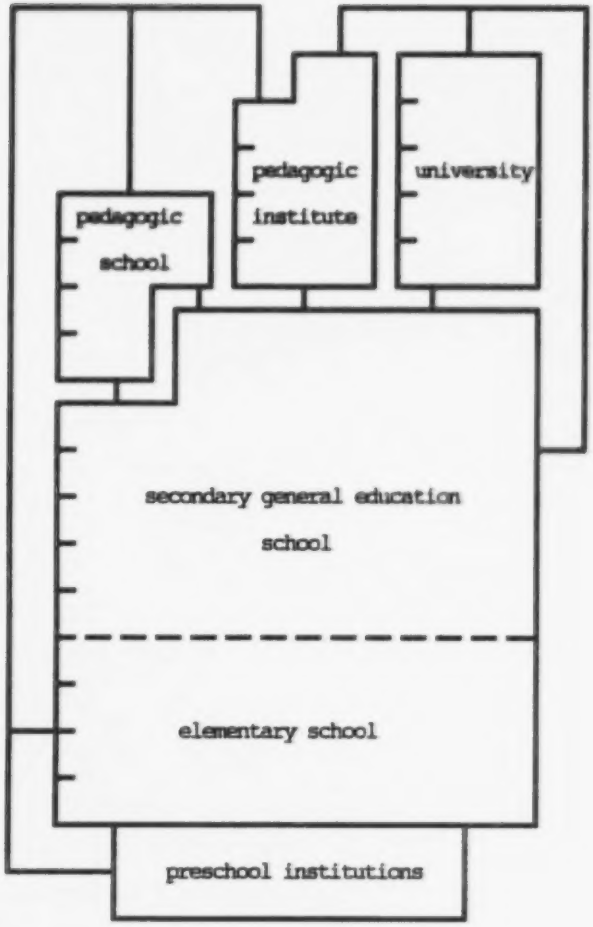

Fig. 3 - Teacher education in the USSR

Pedagogic research, refresher courses, curriculum development , and other school supporting activities are organized and carried out also by universities.

6.2 Educational management and teacher education

In the documents about the 1984 school reform one section is dedicated to measures with respect to the improvement of the teacher preparation and the qualification of the pedagogic staff within the framework of general education and vocational-technical training (O reforme, 1984, p.94). Within the coming five-year plan, attention must be paid to the following issues in teacher education:

- -the training of teachers specialized in production training,
- -the psychological and pedagogical aspects of the teacher education curriculum,
- -the adjustment of the teaching methods to the guidelines of instructions, embodied in the new general and vocational school curricula,
- -student teaching in the grades 1-4,
- -the development of courses on "vocational orientation" in universities and pedagogic institutes,
- -the improvement of the initial training of teachers in general vocational schools,
- -the improvement of teacher education in remote areas (Siberia, Kazakhstan, Soviet Asia),
- -the transition of four-year courses into five-year courses for Russian language and literature, history, mathematics, and physics,
- -the admission of students to teacher education institutions,
- -the development of research.

The 1985 Act on Public Education is less specific with respect to the education of teachers. In Article 57 the various institutes which deal with teacher education are mentioned, and a brief summary is given with respect to the standards for the admittance of future educational personnel:

Article 57

(...) The training of teacher cadres is designed to meet the needs of teaching-upbringing institutions for educational personnel having high ideological and professional standards, a sense of high civic duty, and moral integrity, possessing broad erudition and culture, capable of

Subject	Hours	Year				
		1	2	3	4	5
History of the Party	340	+				
Marxism-Leninism	280		+	+		
Political economy	280				+	
Scientific communism	160					+
Foundation of scientific atheism	48					+
Soviet law	32					+
Information technology	100	+				
Professional orientation	46	+				
Pedagogics	270	+	+			
Psychology	260		+	+		
Foreign language teaching methodology	240				+	+
Introduction to linguistics		+				
General linguistics	44					+
Modern Russian language	160	+				
Latin	150					
Practical subjects 1st foreign language	2582	+	+	+		
Theoretical subjects 1st foreign language	422			+	+	
General background reading	60	+				
Literary works of the country	170				+	+
Practical subjects 2nd foreign language	1082		+	+	+	+
Theoretical subjects 2nd foreign language	24					+
Regional studies 2nd foreign language	122	+	+			
Political system of the country	16				+	
Civic duty	50	+				
Military training	600		+	+	+	
Physical training	632	+	+	+	+	+
Electives	316	+	+	+	+	+
Attestation	54					
Continuing pedagogical practice	164	+	+	+		
Teaching practice	490				+	+
Pioneer practice	164		+			
Reviews	27	+	+	+		
Final papers					+	+

Table 11 - Curriculum of the Moscow State Institute for Foreign Languages, 1988/89 Academic Year; Specialization: teacher of two foreign languages

setting an example for children and young people, and prepared to deal with the tasks facing public education under conditions of perfecting socialism and accelerating scientific-technological progress.
(Soviet Education, 1989, Vol. XXXI, no. 2, p.41)

Also the 1988 Decree of the CPSU Central Committee Plenum is very vague about the reform of teacher education. In several places refresher courses, the upgrading of teachers, and the material equipment for teacher education institutions are stressed. In the final section of the document a phrase emphasizes what has already been said in the 1985 Act on Public Education (Article 57):

It is essential to improve radically the training of teaching cadres and to select for enrollment in the pedagogical educational institutions the best representatives of youth, persons who have the disposition to work with children and who see that as their calling.
(Soviet Education, 1989, Vol. XXXI, no 4, p.82)

Much more specific is the 1988 Report of the USSR State Committee on Public Education (Yagodin, 1988). The section on "The role of the teacher in educational restructuring" starts with the description of the teacher the perestroika is looking for: "We need teachers who have an excellent knowledge of their subjects, a good command of various teaching methods and a solid grounding in psychology and pedagogy. And this is not sufficient. Erudition, culture, a thirst for knowledge and a striving for creative activity are also required of them. (...) Every teacher must become an innovator and find his own teaching methods corresponding to his personal characteristics. For a true teacher is a personality" (Yagodin, 1989, p.10).
Although every year 210,000 teachers are trained, there is a permanent shortage of teachers, due to very familiar reasons (Yagodin, 1989, pp. 10-11):

- students entering teacher training institutions have little regard for the teacher's profession;

- the extensive development of training of pedagogical personnel; in the coming decade the number of teachers (2.7 million) will have to be increased by 50 per cent;
- the low prestige of the teaching profession, the teachers' low social status, and a salary still lower than the average earnings in the country.

With respect to the teacher education curriculum, the report emphasizes the decrease of specialization in the field of various subject matter areas in favor of the development of the individual qualities of the student and the humanitarian component of the teacher education program.
Restructuring the teacher education curriculum is considered a very acute need. This because of the fact that 72 per cent of the teachers are in favor of the ongoing changes in the schools.
The training of teachers for rural schools asks for special attention. Teachers in rural area have a complicated task to fulfill. They often teach a number of subjects, and they are expected to contribute to the cultural events of the area they are working in.

With respect to the psychological-pedagogical training of future teachers important proposals are made by Orlov (1988). This author describes two psychological schools which influenced the process of teaching and upbringing in the past: the internalist theory of instruction (Vygotskii), and the externalist tradition (behaviorism). The internalist theory has been viewed as alien to the socialist ideology. The externalist theory, however, has been worked out into a Soviet psychological-pedagogical science, and is still dominating instruction and upbringing. Unmotivated schoolchildren, children with neurotic abnormalities, young alcoholics, and many other problems in and outside the school, are seen by Orlov "as the result of a spiritual/intellectual production structured as a type of material production; it seems to us that all these problems are but different forms of protest (...) against instruction and upbringing structured in accordance with the externalist approach" (Orlov 1988, pp. 52-53).
Orlov's alternative consists of a personality based theory of teaching and upbringing which also forms the basis for teacher training courses in

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pedagogic institutes and universities. Personality based instruction will lead to restructuring on principles of dialogization, problematization, personalization and individualization, and to "overall humanization of the teaching-upbringing process in the schools as well as the higher pedagogical institutions and teacher refresher institutes" (Orlov 1988, p. 56).

6.3 The functions of teachers

In the seventies the Psychological Department of the Herzen Pedagogic Institute at Leningrad - one of the most important centers for teacher training in the Soviet Union - carried out a research into the functions of a teacher, under the direction of A.I. Shcherbakov (Treffers, 1985).
In the function-analysis in the Soviet Union - the term professiographics is used - applied to the teaching profession, "methods and parameters are looked for with which to determine the characteristic qualities of the teacher - his qualifications as an acting subject in pedagogic activities and social developments (Shcherbakov). The results of this analysis are incorporated in a so-called professiogram, a list of psychological functions needed for a specific professional activity.

In the Soviet Union function-analysis aims primarily at an optimum tuition. This implies a direct improvement of the teacher training taking place at the institute where the research is carried out.
The tasks of the teacher have been described by Shcharbakov in terms of functions. He declares functions to be "the components which together constitute the work of a teacher". Shcharbakov makes a distinction between general pedagogic functions and functions with regard to work in general. He mentions two groups of four functions which together constitute the framework of the professiogram:

General Pedagogic Functions

the information function
the developing function
the orientating function
the mobilizing function

Functions concerning Work in General

the constructive function
the communicative function
the organizing function
the investigating function

Originally the research was focused on the functions of a teacher which can be classified under one of these eight headings (Table 12). Later the eight functions were taken together as one group called "practical competencies and skills" and placed in a system of psychological properties and qualities which every teacher should possess (see Treffers, 1985).

At the Herzen Pedagogic Institute the professiogram of a teacher is primarily employed in teacher training. But students tend to be informed about the various functions, other than to have opportunity to practice them, which is contrary to the tenor of the professiogram. During the teaching

1 Informative function
(to equip the pupil with knowledge of the basic principles of natural science)

2 Developing function
a) to develop the pupils' intellect and gifts
b) to steer the mental activities of the pupils and the learning process

3 Mobilizing function
a) to promote the pupils' ability to apply theoretical knowledge to the solution of practical problems
b) to develop practical skills and competencies
c) to foster concentration

4 Orientating function
a) to promote faith in communism
b) to further the pupils' social and vocational orientation

5 Constructive function
a) to analyse and modify the subject-matter of teaching when preparing lessons
b) to plan one's own activities and those of the pupils
c) to furnish the class-room

6 Organising function
a) to organise the independent activities of the pupils
b) to organise the extra-mural activities of the pupils

7 Communicative function
a) to make contacts with the pupils
b) to keep contacts with colleagues
c) to keep contact with the school-management

8 Investigating function
(examination of pedagogic processes and phenomena)
a) to study the individual pupils in the class
b) to analyze one's own pedagogic impressions
c) to study methods
d) to analyze one's own strong and weak points as a teacher-educator

Table 12 - Functions of the science teacher

practice the professiogram serves as a theoretical framework which supplies criteria for observation (Treffers, 1986).

6.4 Ideas of students on education and teacher education

In the 1988/89 academic year a research project is done by the author among prospective teachers in various teacher education institutions in the USSR. The data presented here are collected by means of a questionnaire.
Future primary teachers of the Herzen Pedagogic Institute in Leningrad (n=26) and prospective secondary teachers of the Moscow Institute of foreign languages (n=35) are asked to give their main reasons for becoming a teacher, to mention the most important characteristics of a good teacher, and to list the subjects, themes and activities which they think should be taught during teacher preparation courses.

Profiles of prospective teachers

The answers of the students on the various question in the questionnaire can be spread over five catagories:
- pupil oriented answers
- task oriented answers
- teacher oriented answers
- society oriented answers
- foundations oriented answers

Based on the content of the categories and the subcategories distinguished within the categories the following profiles are made of future primary and secondary teachers in the USSR.

For future primary teachers in the USSR the main reasons for becoming a teacher are related to contact with and care of children. Future primary teachers love children and like to be with children. But they also like to share knowledge and to teach people. Students who want to go into primary teaching have various personal arguments for their choice. Working in the elementary school is considered a good job for a woman, which leaves enough

time for a family. In their eyes the elementary school is easier than the secondary school, and the wages are relatively high. For some students experiences in a pioneer camp or the relation with their own teachers play a role in their choice for the teaching profession. Others mention the present situation in elementary education as a reason for becoming a teacher: "I am not satisfied with the situation in the elementary school, I want to change it".

Future primary teachers in the Soviet Union stress the empathic qualities of a teacher; a teacher must love children. They also consider justice very important: a good teacher treats all children in the same manner. Teachers need a good knowledge of the subject matter. Their basic attitude must be gentle with all people, clever, sincere and gay, "with a beautiful and kind soul".

Future primary teachers in the USSR ask for courses in practical psychology and pedagogics. They want to practice teaching in classes, in order to mix with children, and to study methods of teaching. This group feels a need for subject matter knowledge with respect to various teaching areas, and practical training in drawing, music and dance.

Also future secondary teachers in the USSR emphasize contact and care when they express their reasons for becoming a teacher. The counseling aspects of teaching, however, are almost neglected by this group in favour of the teaching tasks. This group of students very much likes to teach people and to share knowledge. For most students the subject they have chosen to teach is very important. For future secondary teachers also personal arguments play a role: relatively high wages and compared with other jobs much leisure time enables a teacher to have a family. Russian students who want to become teachers in a secondary school often express social reasons for the choice of their profession. They stress the importance of education for society, especially for the broadening of the relations of the USSR with other countries. Many students formulate their society oriented reasons for becoming a teacher in terms of a personal contribution to the improvement of the educational system in their country or to society in general: "Great changes take place; I want to take part in it".

According to future secondary teachers in the Soviet Union a good teacher loves children: "Teachers are our second mothers"! But good teachers must be respectful also. Many students put an emphasis on the importance of the knowledge of the subject matter for a teacher. A good teacher is well educated and has a good background; he must be a personality "to make children respect you".
The needs of future secondary teachers in the Soviet Union with respect to the teacher education program are courses in applied psychology and pedagogics, teaching practice in schools, learning how to speak, often called "rhetorics" or "oral practice", teaching methods and subject matter courses. With respect to the subject matter courses the students show a variety of interests. Besides conventional subjects also logic, ethics and aesthetics are mentioned. Also future secondary teacher like to partake in practical courses during the period of teacher education: besides language practice abroad the students mention drawing, music and dance.

During the 1985/86 academic year the questions asked to the students in the USSR are answered by future primary teachers (n=26) and future secondary teachers (n=26) in the USA. The profiles of the American students are given here as well:

Many times, future primary teachers in the USA have chosen their teaching profession because they like to work with children. Seeing children learn is felt to be very satisfying. Future primary teachers in the USA are also motivated for teaching because of the importance of the teaching profession for society.
According to the students who want to become a teacher in an elementary school teachers must be very dedicated and caring. A good teacher is attentive; he pays equal attention to every child's emotional and academic needs and problems. In their eyes a good teacher is also motivating children, and energetic and enthusiastic for his teaching job.
Future primary teachers in the USA expect from the teacher education program activities which are informative about children and put an emphasis on classroom management, teaching practice and the training of various teach-

	categories/subcategories	USSR		USA		NETH		MOZ
		pr	sec	pr	sec	pr	sec	sec
reasons for becoming a teacher	**pupil oriented**							
	contact and care	+	+	+		+		
	pupil and task oriented							
	counseling				+			
	teaching		+				+	
	task and teacher oriented							
	kind of work			+	+	+	+	
	subject matter	+	+					
	personal reasons	+					+	
	society oriented							
	education and society		+	+	+			
qualities of a good teacher	**pupil oriented qualities**							
	empathic qualities	+	+	+	+			+
	task oriented qualities							
	classroom management qualities	+	+		+	+	+	
	teaching qualities		+	+		+	+	+
	teaching content		+		+		+	+
	personal qualities							
	basic attitude	+	+					+
subjects themes activities	**pupil oriented**							
	information about children	+	+	+		+		
	task oriented							
	classroom management			+ +	+		+	
	teaching		+	+	+	+	+	
	teaching skills		+	+	+	+	+	
	curriculum content	+	+	+		+	+	
	teacher oriented							
	feedback				+		+	
	foundations oriented							
	foundations of teaching				+			

Table 13 - Subcategories frequently stressed by Russian, American, Dutch and Mozambiquan students with respect to the three questions asked in the questionnaire. (pr = future primary teachers; sec = future secondary teachers)

ing and relational skills. These students also expect additional subject matter courses with respect to a number of subject matter areas.

Future secondary teachers in the USA are motivated for teaching because of the various counseling tasks they ascribe to teachers in secondary schools have . In relation to teaching, these students often use the verb "to help": "To help children to learn and to understand", "to help children to develop interest in learning". For these students a school is a stimulating environment. They expect satisfaction seeing children learn. Some of them have chosen to become a teacher also because of society oriented reasons. "Teachers are a necessary and important part of society" and "Education is our future" are two examples of the answers given by future secondary teachers when they try to express the value they feel of education for society.
According to many future secondary teachers in the USA, a good teacher is caring, flexible, open minded to children's own ideas, and dedicated to every child's needs and problems. A good teacher also deals well with people, has good communication, and is knowledgeable; he knows his subject matter.
Future secondary teachers expect from the institute courses in educational psychology, the process of learning, classroom management and discipline, communication, and activities dealing with teaching, planning, and time management. This group is open for feedback which enables them to get to know themselves better and to find out what they need to learn more of. From the teacher education program they also expect additional subject matter courses.

A comparison is made between the answers given by the Russian students and students in the USA, the Netherlands, and Mozambique (Table 13). The most typical characteristics of the Russian future elementary and secondary teachers are listed:
- With respect to the reasons for becoming a teacher, the subcategory "contact and care" is not only emphasised by future elementary teachers but also by future secondary teacher.

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- Counseling aspects of teaching are not within the horizons of future elementary and secondary teachers;
- The subcategory "kind of work" (satisfaction) is not considered important for becoming a teacher;
- Subject matter aspects of teaching play an important role;
- With respect to the most important qualities of a teacher, Russian students put the emphasis on a basic attitude (well educated, a good background, a personality, kind and gentle with all people, etcetera);
- Although Russian students stress classroom management qualities of a teacher, the training of relational skills is neglected.
- Feedback training is not considered important for future teachers

6.5 Ideas of teacher educators about teacher education

In 1989 teacher educators (n=27) from pedagogic institutes in various republics of the USSR are asked to mention the underlying concepts or ideas they are attempting to teach their students, and to list the measures, published in official documents, they find stimulating in order to accomplish their views on teaching.

For the categorization of the ideas teacher educators in the USSR have about teacher education the same categories are used as applied to the students' answers mentioned in the previous section (6.4).

The tentative results of the project demonstrate that the underlying concepts and ideas teacher educators want to realize, first of all deal with **children**. Teachers must love children, and must understand children at any moment. It is considered important for teachers not to suppress the child's own understanding.

Furthermore, the ideas of teacher educators are oriented towards the **teacher's tasks**. Teacher education courses have to focus on the professional attitude towards work. The emphasis on practical aspects of teaching, on the importance of communication, and on the humanization and democratization of the relation between the pupils and the teacher belong to this category. With respect to this aspect of teacher education also the attitude of the students towards the various disciplines taught in school is mentioned.

The third group of underlying concepts and ideas has to do with the **teacher**. These ideas stress the value of self-development, self-improvement, and self-realization. The teacher is seen as an individual, a personality, a member of a teachers collective, as a citizen and as an human being. A teacher must be a creator; teaching must be a passion.

Some ideas of teacher educators are oriented towards **human society**. Children become first of all members of society. Teachers must have a general understanding of the role of human values in society.

Some concepts and ideas deal with **foundations of education**.These concepts are often formulated as contradictions: theory and practice; heredity and environment; upbringing and instruction. Pedagogy is considered to be an integration of philosophy, psychology and physiology.

The answers of the teacher educators in the USSR can be compared with the answers given by teacher educators in the USA (n=32), taken from universities and colleges of teacher education in various states of the United States.

The underlying concepts and ideas of teacher educators in the USA cover the same categories, but within each subcategory the American teacher educators put the emphasis on other aspects of education.

In the eyes of American teachers educators the child is seen first of all as a unique individual who must learn to think for himself and to communicate with others. Teaching content and procedures must depend on the needs of the individual child.

With respect to the tasks of a teacher several American teacher educators stress the importance of teaching skills, a solid understanding of the subject matter, and knowledge of the basic concepts of the social and behavioral sciences for effective teaching.

The teacher must be wise and discerning. He needs a broad background of the liberal arts. He must be creative and able to interest and excite his students. He is often seen as a curriculum modifier and a decision-maker. A teacher is a participant in the process of life long learning. Finally he must be committed to teaching.

Only a few underlying concepts of American teacher educators are oriented towards society. Education makes a contribution to democracy. The education of children is necessary for the survival of civilization.

Some concepts and ideas can be brought under the headings of foundations of education. A few teacher educators in the USA speak about a research-based education, the training of feedback and teaching skills in laboratory situations. Although many times the questionnaires are filled out by teacher educators from private universities or colleges of education, which often have a religious signature, only a few concepts have a relation to religion: 'Life is an eternal struggle between truth and falsehood, good and evil, God and Satan', and 'We need a belief system to operate effectively'.

Teacher educators in the Soviet Union consider the documents which deal with the reconstruction of public education, mentioned in Part II,

"Developments", as very stimulating for the implementation of their own ideas about teaching. Besides, also the idea of basic education ("bazovaya shkola"), published in Uchitel'skaya gazeta", August 26, 1988, is mentioned frequently. Asked for the most important books or scientific articles which influenced their teaching very much, Russian teacher educators mention works of Tolstoi, Makarenko, Blonskij, Ushinskij, Lerner (Development of thinking), Kedrov (Mechanisms of human creativity), Sukhomlinskij (his articles about the humanization of the school), Amonashvili (Hello children!).

Many teacher educators in the USA, however, answer to the question "Which official documents you consider stimulating with respect to the implication of your concepts and ideas": "None". Important books and articles, frequently mentioned by American teacher educators are works of Dewey, Bruner, Piaget, Plato, and in some cases the Bible.

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